

REMARKS

In view of the foregoing amendments, and the following remarks, the Applicant has carefully considered this application in connection with the Examiner's Action and respectfully requests reconsideration of this application.

Objections to the Specification

In paragraph 1, the Examiner has objected to Claims 1- 18 as containing certain informalities. With respect to the informalities cited by the Examiner, the Applicant has taken corrective action suggested by the Examiner. Accordingly, these objections are believed to be overcome.

Rejections Under 35 U.S.C. § 112

The Examiner, in paragraph 3, has rejected Claim 17 under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has rewritten Claim 17 in order to provide a better basis for the term identified by the Examiner. Accordingly, Applicant believes the Examiner's rejection under 35 U.S.C. § 112 has been overcome.

Rejections Under 35 U.S.C. § 102(b)

In paragraph 5, the Examiner rejects Claim 1-3,6-8,13,14,17-19 under 35 U.S.C. § 102(b) as being anticipated by Kuo et al (hereinafter Kuo). First, with regards to independent Claim 1, independent Claim 1 has been amended to include the basic limitations of originally submitted dependent Claims 4 and 13. As such, Claims 4 and 13 have been canceled. Specifically, there is recited a solid state light having an electronic detection device disposed within a housing cavity and viewable through a separated transparent second lens. The second lens and the central lens are integrally formed to comprise a single unitary cover, but are separated from each other,



whereby the cover is disposed across the housing cavity. Support for these limitations are found in Applicant's specification on page 23, lines 25 -28; page 24, lines 1-4; and Figure 26.

The Examiner states that Kuo, in Figure 2, teaches a rim portion of the unitary cover 5 being circular and including a second lens 53 separated from the central portion 51. However, in Figure 2, Kuo actually shows a hollowed rounded outer lens 5 mounted on the front side of a lamp shade, over a flat intermediate lens 4. In Figure 2, Kuo does not show a second lens or window which is integral to the referenced rim portion of the unitary cover, nor does Kuo not show two lenses that are integral to transparent unitary cover which are separate from, and function independent of, one another, as is claimed in Applicant's claim 1. That is, Kuo teaches a set of LEDs generating an light beam which communicates through both co-located lenses: an intermediate lens 4 and a hollow rounded outer lens 5 which are disposed over the light source and are adapted to amplify the intensity of the light beam. See Column 3, lines 1-7; Figure 1.

Unlike Kuo, the present invention, as described and claimed, achieves technical advantages as a solid state light apparatus that has a unitary cover having an central and rim portions that permits a LED generated light beam to pass through the central portion, wherein the separated second lens disposed on the rim portion thereof permits the electronic detection device to be viewable through the separate second lens. This second lens is not used to communicate light, but advantageously allows an internal detection device to be positioned within the housing cavity for viewing forwardly through the separate second lens. Accordingly, independent Claim 1 is believed to be allowable over the cited prior art for the foregoing reasons.

With regards to Claim 19, the Examiner states that the teachings Kuo inherently meet the limitation of Claim 19. Applicant has amended Claim 19 similar to Claim 1, and believes now the rejection under 35 U.S.C. §102(b) has been overcome for the foregoing reasons. Independent Claim 19 recites the step of selectively operating the unique solid state light apparatus at a roadway intersection, with the apparatus having an electronic detection device disposed within the housing cavity thereof viewing forwardly through the separated transparent second lens,

wherein the second lens is integrally formed to the unitary cover. Accordingly, independent Claim 19 is believed to be allowable for the reasons, including those directed to independent Claim 1.

Rejections Under 35 U.S.C. §103(a)

In paragraph 7, the Examiner rejects Claims 4,5 and 20 under 35 U.S.C. §103(a) as being unpatentable over Kuo in further view of Yashuhiko. The Examiner recognizes that Kuo does not disclose a solid state light apparatus comprising an electronic device comprises a camera positioned in the housing cavity, but has nevertheless rejected the present invention in further view of Yashuhiko. The prior art, alone or in combination, neither teaches nor suggest a solid state apparatus having a transparent unitary cover with an integral central lens portion, comprising a Fresnel lens, and a separate clear second clear lens portion as claimed. The present invention achieves technical advantageous in that an internal electronic detection device can be positioned proximate the unitary cover within the housing cavity to view outwardly through the clear second lens, simultaneously, as the light beam communicates through the central lens. Specifically, the position of the second lens is such that the internal detection device will not interfere or obstruct the light beam as it passes through the central lens. Consequently, Applicant respectfully disagrees with the Examiner that the present invention would be obvious in light of the Kuo and Yashuhiko. One of ordinary skill in the art would not combine the teachings of Kuo with those of Yashuhiko to arrive at the present invention, as claimed.

Regarding dependent Claim 5, dependent Claim 5, which includes all limitations of dependent Claim 4, is also believed to be allowable for the foregoing reasons. Here, Claim 5 recites specifically that an electronic device comprises a camera. The prior art, standing alone or in combination fails to teach the limitations of dependent claim 5.

In paragraph 8, the Examiner rejects Claim 9 under 35 U.S.C. §103(a) as being unpatentable over Kuo. The Examiner recognizes that Kuo does not teach a central portion of the unitary cover having a rectangular periphery, but rather teaches a central lens with a periphery



that is circular. The Applicant respectfully traverses the examiner's rejection. In this instance, the Examiner states that it would have been obvious design choice to modify the unitary cover with a rectangular periphery. The prior art, as previously discussed, does not teach a transparent second lens that is integrally part of the unitary cover, and yet stands separate and apart from the central lens. The present invention achieves technical advantages in that with a transparent second lens, the invention allows for an electronic detection device to be positioned within the housing cavity for viewing forwardly through the second lens, and thus, this rectangular shape increases the surface area needed in order to place the circular second lens near the periphery of the unitary cover. Moreover, this rectangular shape advantageously allows the second lens to be proximate to, and independent of, the central lens. Thus, the prior art fails to teach or suggest a rectangular shaped unitary cover since the prior art, standing alone or in combination, fails to show a transparent central lens and a second lens which is integrally juxtaposed to the central lens, as disclosed and claimed by the Applicant's invention. Accordingly, dependent Claim 9 is believed to be allowable over the cited prior art for the abovementioned reasons.

In regards to paragraph 9, the Examiner rejects Claims 10-12 under 35 U.S.C. §103(a) as being unpatentable over Kuo in view of Hochstein. The Examiner states that although Kuo does not teach a unitary cover comprising either glass or plastic material, Houchstein, however, teaches a traffic information system including a unitary cover with a transparent glass or plastic cover. Applicant respectfully disagrees with the Examiner that the present invention would be obvious in light of the combination of Kuo with Hochstein. Specifically, the combination of Kuo with Hochstein neither teaches nor suggests a transparent unitary cover disposed over a housing cavity that functions as a single integral component having a central lens portion for communicating solid state light therethrough, and a separate second lens portion that allows for forward viewing of an electronic detection device therethrough from within the housing cavity. Hochstein neither deals with nor relates to the same issues as Kuo. Accordingly, Claims 10-12 are believed to be allowable over the cited prior art for the foregoing reasons.



With regards to paragraph 10, the Examiner has rejected Claims 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Kuo in view of McGaffigan. The Examiner acknowledges that the Kuo does not teach a solid state apparatus comprising a plurality of LEDs each having a semiconductor die generating a light source generally perpendicular to the respective die, but has nevertheless rejected the present invention in further view of McGaffigan. The Applicant respectfully disagrees with the Examiner's rejection.

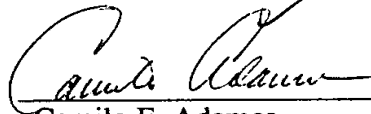
Unlike the present invention, McGaffigan discloses a simulated light system consisting of an optical light pipe which emits light rays in substantially radial direction, wherein the light rays are perpendicular to a tangent of the curved prismatic surface of the light pipe. See Column 3, lines 17-20; see also Abstract.

Kuo, standing alone or in combination with McGaffigan, does not teach nor suggest a solid state apparatus that houses an array of LEDs which transmits a light beam through the central lens portion of a unitary cover positioned over the opening of a solid state traffic signal housing, wherein the light is generated perpendicular to a respective LED die. Thus, one of ordinary skill in the art would not have combined Kuo with McGaffigan to arrive at the present invention.



In summary, Applicant has canceled Claims 4 and 13 and has amended Claims 1, 7-9, 17, and 19. In light of the amendments and for the reasons stated herein, it is believed that the pending claims are now in condition for allowance. If the Examiner has any other matters which remain, the Examiner is encouraged to contact the number to the undersigned attorney to resolve these matters by an Examiner's Amendment where possible.

Respectfully Submitted,



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Dated

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend the Claims as follows:

1. (Amended) A solid state light apparatus, comprising:
a housing having a cavity;

an area array of light emitting diodes (LEDs) disposed in said housing cavity and
generating a light beam; [and]

a unitary cover coupled to said housing and disposed across said cavity, said cover
having an integral [inner] central portion and [outer] rim portion, said [inner] central portion
being convex and shaped as a lens, said lens transmitting said light beam emitted by said LED
area array, and said [outer] rim portion extending outwardly from said lens, wherein said cover
rim portion includes a second lens separated from said central portion lens; and

an electronic detection device disposed in said housing cavity and being viewable
through said second lens.

5. (Amended) The solid state light apparatus specified in Claim [4] 1 wherein said
electronic device comprises a camera.

7. (Amended) The solid state light apparatus specified in Claim 1 wherein said cover outer
portion encompasses said cover [inner] central portion.

8. (Amended) The solid state light apparatus specified in Claim 1 wherein said cover [inner]
rim portion has a circular periphery.



9. (Amended) The solid state light apparatus specified in Claim 8 wherein said cover [outer] rim portion has a rectangular periphery.

17. (Amended) The solid state light apparatus specified in Claim 1 wherein said lens is a [prism or] clear lens[,] with a prism attached.

19. (Amended) A method of controlling traffic using a solid state light apparatus, comprising:

a housing having a cavity;

an area array of light emitting diodes (LEDs) disposed in said housing cavity and generating a light beam; [and]

a unitary cover coupled to said housing and disposed across said cavity, said cover having an integral [inner] central portion and [outer] rim portion, said [inner] central portion being convex and shaped as a lens, said lens transmitting said light beam emitted by said LED area array, and said [outer] rim portion extending outwardly from said lens, wherein said cover rim portion includes a second lens separated from said central portion lens; and

an electronic detection device disposed in said housing cavity and being viewable through a transparent portion of said second lens, comprising the step of:

selectively operating said light apparatus at a roadway intersection.